

Amendments to the CLAIM:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:~~

~~measuring an actual pressure ratio across the compressor;~~

~~comparing the measured actual pressure ratio with a predetermined reference value;~~

and

~~detecting an error as a function of the result of the comparison~~ A method for operating an internal combustion engine, the internal combustion engine having a compressor to compress air supplied to the internal combustion engine, the method comprising:

measuring an actual pressure ratio across the compressor for diagnosing a compression;

comparing the measured actual pressure ratio with one of a desired setpoint pressure ratio to be set and a modeled actual pressure ratio; and

detecting an error as a function of a result of the comparing.

2. (Currently Amended) The method as recited in claim 1, wherein the predetermined reference value is ~~[[a]]~~ the setpoint pressure ratio across the compressor.

3. (Currently Amended) The method as recited in claim 1, wherein the predetermined reference value is ~~[[a]]~~ the modeled actual pressure ratio determined based on at least one engine parameter.

4. (Original) The method as recited in claim 3, wherein the modeled actual pressure ratio is determined as a function of an engine speed and an air mass flow rate.

5. (Original) The method as recited in claim 2, wherein the compressor is an electrically operated supercharger.

6. (Original) The method as recited in claim 5, wherein the diagnosis is performed in one of an idling state and a near-idling state.

7. (Currently Amended) ~~The method as recited in claim 5,~~ A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;

comparing the measured actual pressure ratio with a predetermined reference value;

and

detecting an error as a function of the result of the comparison;

wherein the predetermined reference value is a setpoint pressure ratio across the compressor,

wherein the compressor is an electrically operated supercharger, and

wherein the electrically operated supercharger is triggered in a defined manner, as part of an early run-up.

8. (Currently Amended) ~~The method as recited in claim 6,~~ A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;

comparing the measured actual pressure ratio with a predetermined reference value;

and

detecting an error as a function of the result of the comparison;

wherein the predetermined reference value is a setpoint pressure ratio across the compressor,

wherein the compressor is an electrically operated supercharger,

wherein the diagnosis is performed in one of an idling state and a near-idling state,

and

wherein the electrically operated supercharger is triggered in a defined manner, as part of an early run-up.

9. (Original) The method as recited in claim 8, wherein a divert air valve is closed for the diagnosis.

10. (Original) The method as recited in claim 2, wherein the compressor is one of an exhaust gas turbocharger and a supercharger.

11. (Original) The method as recited in claim 3, wherein the compressor is an electrically operated supercharger.

12. (Original) The method as recited in claim 11, wherein the diagnosis is performed in one of an idling state and a near-idling state.

13. (Currently Amended) ~~The method as recited in claim 11,~~ A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;

comparing the measured actual pressure ratio with a predetermined reference value;

and

detecting an error as a function of the result of the comparison;

wherein the predetermined reference value is a modeled actual pressure ratio determined based on at least one engine parameter,

wherein the compressor is an electrically operated supercharger, and

wherein the electrically operated supercharger is triggered in a defined manner, as part of an early run-up.

14. (Currently Amended) ~~The method as recited in claim 11,~~ A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;

comparing the measured actual pressure ratio with a predetermined reference value;

and

detecting an error as a function of the result of the comparison;

wherein the predetermined reference value is a modeled actual pressure ratio determined based on at least one engine parameter,

wherein the compressor is an electrically operated supercharger,

wherein the diagnosis is performed in one of an idling state and a near-idling state,
and

wherein the electrically operated supercharger is triggered in a defined manner, as part of an early run-up.

15. (Original) The method as recited in claim 14, wherein a divert air valve is closed for the diagnosis.

16. (Original) The method as recited in claim 3, wherein the compressor is one of an exhaust gas turbocharger and a supercharger.

17. (Currently Amended) ~~A system for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:~~

~~a measurement unit for measuring engine operation variables;~~

~~a determination unit for determining an actual pressure ratio across the compressor based on the engine operation variables measured by measurement unit;~~

~~a comparator unit for comparing the determined actual pressure ratio with a predetermined reference value; and~~

~~an error detection unit for detecting an error as a function of the result of the comparison by the comparator unit~~ A device for operating an internal combustion engine, the internal combustion engine having a compressor to compress air supplied to the internal combustion engine, the device comprising:

a determining arrangement, for diagnosing a compression, to determine an actual pressure ratio across the compressor from variables measured by a measuring arrangement;

a comparing arrangement to compare the actual pressure ratio with one of a desired pressure ratio and a modeled actual pressure ratio; and

an error detecting arrangement to detect an error as a function of a result of the comparing.